

Author index

- Ahmed, M. 189
d'Alarcao, M. 321
Albersheim, P. 291
Allan, G.G. 257, 273
An, J. 291
Apparu, C. 313
Asaad, A.N. 347
Awal, A. 189
- Bacic, A. 67
Bandwar, R.P. 197
Bassily, R.W. 347
Basu, S. 283
Behrman, E.J. C9
Bender, H. 161
Bhattacharyya, T. 283
Brillouet, J.-M. 135
Brisson, J.-R. 1
- Chanzy, H. 209
Chapelle, S. 39
Clarke, A.E. 67
Coxon, B. 171
Craig, D. 67
- Darvill, A.G. 291
Davis, J.T. 125
Defaye, J. 245
Desai, T. C5
Driguez, H. 313
- El-Sokkary, R.I. 347
Enevoldsen, K. 109
- Ferro, D.R. 25
Filippova, N. 321
Fukunaga, K. C1
- Gajdoš, J. 25
Garnian, A. 245
Gane, A.M. 67
- Gao, X.M. 333
García Fernández, J.M. 245
Gigg, J. C5
Gigg, R. C5
Gohdes, M. 179
Gras, J.-L. 339
Guerrini, M. 11
Guillén, R. 291
- Hao, A.Y. 333
Haq, Q.N. 189
Hasegawa, R. 231
Henrissat, B. 209
Henson, C.A. 65
Howlett, G.J. 67
Hricovíni, M. 11
- Iacobucci, S. 321
Im, H. 145
Impallomeni, G. 291
- Jann, B. 353
Jann, K. 353
Jennings, H.J. 1
Jha, R. 125
- Kasper, D.L. 1
Katzenellenbogen, E. 245
Kim, K.B. C9
Kimura, A. 87
Kitamura, S. 231
Kochanowski, H. 283, 353
Kogan, G. 1
Kováč, P. 327
Kvíck, Å. 209
- Lange, M. 179
Lei, P. 327
- Marcussen, J. 109
Mignon, V. 339

- Mischnick, P. 179
Møller, B.L. 109
Motawia, M.S. 109
Munro, S.L.A. 67
- Nakao, K. C1
Nashed, M.A. 347
Nouguier, R. 339
- Ogawa, Y. 327
Ohguchi, Y. 231
Olsen, C.E. 109
Orefici, G. 1
- Pauly, M. 291
Pedersen, C. 245
Pellerin, P. 135
Petzold, K. 179
Peyron, M. 257, 273
Piani, S. 11, 25
Pozsgay, V. 51, 171
- Quader, M.A. 189
- Ragazzi, M. 25
Rao, C.P. 197
Raymond, S. 209
Robbins, J.B. 51
- Robyt, J.F. 87
Romanowska, E. 245
- Sengupta, P. 283
Shashkov, A.S. 283, 353
Shimizu, T. C1
Stein, A. 179
Svensson, B. 313
- Takeo, K. 231
Tong, L.H. 333
Torri, G. 11
Tran Qui, D. 209
- Ulrich, J. 245
Ungarelli, F. 11, 25
- Verchère, J.-F. 39
Vidal, S. 135
von Hunolstein, C. 1
- Williams, P. 135
Williamson, G. 313
- York, W.S. 291
Youssef, R.H. 347
- Zhang, F.S. 333
Zhang, Z. C1

Subject index

2-Acetamido-2-deoxy- α -D-glucopyranose

Stereoselective preparation of alkyl glycosides of 2-acetamido-2-deoxy- α -D-glucopyranose by nonclassical halide-ion catalysis and synthesis and NMR spectroscopy of α -D-Gal p-(1 \rightarrow 3)- α -D-Glc pNAc-OMe 171

Active-site residues

Characterization of high pl α -glucosidase from germinated barley seeds: substrate specificity, subsite affinities and active-site residues 145

Acyl rearrangement

Hydrolysis of the GlcNAc oxazoline: deamidation and acyl rearrangement 125

Alkali extract

Structural study of a polysaccharide from the seeds of *Borassus flabellifer* Linn. 189

Alkyl glycosides

Stereoselective preparation of alkyl glycosides of 2-acetamido-2-deoxy- α -D-glucopyranose by nonclassical halide-ion catalysis and synthesis and NMR spectroscopy of α -D-Gal p-(1 \rightarrow 3)- α -D-Glc pNAc-OMe 171

Anodic oxidation

Deprotection of *p*-methoxyphenyl pyranosides by anodic oxidation 321

O-Antigen

Structure of the *Hafnia alvei* strain PCM 1188 O-specific polysaccharide 245

Structure of the O-specific side chain of the *Escherichia coli* O128 lipopolysaccharide 283

Arabinogalactan

Characterization of five type II arabinogalactan-protein fractions from red wine of increasing uronic acid content 135

Arabinogalactan-protein

Characterization of five type II arabinogalactan-protein fractions from red wine of increasing uronic acid content 135

Arabinogalactan-proteins

Structural analysis of the carbohydrate moiety of arabinogalactan-proteins from stigmas and styles of *Nicotiana glauca* 67

Barley α -glucosidase

Characterization of high pl α -glucosidase from germinated barley seeds: substrate specificity, subsite affinities and active-site residues 145

Borassus flabellifer Linn.

Structural study of a polysaccharide from the seeds of *Borassus flabellifer* Linn. 189

Branch point of starch

Chemical synthesis of 6'- α -maltosyl-maltotriose, a branched oligosaccharide representing the branch point of starch 109

Capsular polysaccharide

NMR reinvestigation of the capsular K27 polysaccharide (K27 antigen) from *Escherichia coli* O8:K27:H⁻ 353

Cellulose II structure

The crystal structure of methyl β -cellotrioside monohydrate 0.25 ethanolate and its relationship to cellulose II 209

Cell wall

Metabolism of xyloglucan generates xylose-deficient oligosaccharide subunits of this polysaccharide in etiolated peas 291

Chemical modification

Characterization of high pl α -glucosidase from germinated barley seeds: substrate specificity, subsite affinities and active-site residues 145

Chitosan

Molecular weight manipulation of chitosan I: kinetics of depolymerization by nitrous acid 257

- Molecular weight manipulation of chitosan II: prediction and control of extent of depolymerization by nitrous acid 273
- Chromogenic substrate
- Synthesis of 2- and 4-nitrophenyl β -glycosides of β -(1 \rightarrow 4)-D-xylo-oligosaccharides of dp 2-4 231
- ¹³C NMR
- Tungstate complexes of aldoses and ketoses of the *lyxo* series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39
- Convenient preparation of monoacylated β -cyclodextrin (cyclomaltoheptaose) on the secondary hydroxyl side 333
- Conformation
- Conformational analysis of heparin epoxide in aqueous solution. An NMR relaxation study 11
- Conformational analysis
- Conformational analysis of heparin epoxide: molecular mechanics computations 25
- Coupled enzymic assays for the decycling maltodextrinase and α -amylases
- Partial purification and characterization of nitrophenyl maltosaccharide-hydrolyzing enzymes from *Lactobacillus* sp. no. 26X 161
- Crystal packing
- The crystal structure of methyl β -cellotrioside monohydrate 0.25 ethanolate and its relationship to cellulose II 209
- Crystal structure
- The crystal structure of methyl β -cellotrioside monohydrate 0.25 ethanolate and its relationship to cellulose II 209
- Cyclic carbonates
- Cyclic carbonates as protecting groups in cyclitol chemistry C5
- Cyclodextrin glucosyltransferase
- Chemoenzymatic synthesis of 6"-S- α -D-glucopyranosyl-6"-thiomaltooligosaccharides: their binding to *Aspergillus niger* glucoamylase G1 and its starch-binding domain 313
- Cyclodextrins
- Convenient preparation of monoacylated β -cyclodextrin (cyclomaltoheptaose) on the secondary hydroxyl side 333
- Deamidation
- Hydrolysis of the GlcNAc oxazoline: deamidation and acyl rearrangement 125
- 6-Deoxy-6-iodo- β -CD
- Chemoenzymatic synthesis of 6"-S- α -D-glucopyranosyl-6"-thiomaltooligosaccharides: their binding to *Aspergillus niger* glucoamylase G1 and its starch-binding domain 313
- Depolymerization
- Molecular weight manipulation of chitosan II: prediction and control of extent of depolymerization by nitrous acid 273
- Dimethoxymethane
- Synthesis of methylene acetals in the D-glucose, D-galactose, D-mannose, and D-fructose series by an improved transacetalation reaction from dimethoxymethane 339
- E. coli*
- NMR reinvestigation of the capsular K27 polysaccharide (K27 antigen) from *Escherichia coli* O8:K27:H⁻ 353
- E. coli* O128
- Structure of the O-specific side chain of the *Escherichia coli* O128 lipopolysaccharide 283
- Endoglucanase
- Metabolism of xyloglucan generates xylose-deficient oligosaccharide subunits of this polysaccharide in etiolated peas 291
- Endotoxin
- Structure of the *Hafnia alvei* strain PCM 1188 O-specific polysaccharide 245
- Enzymatic preparation of oligosaccharides
- Chemical synthesis of 6'- α -maltosyl-maltotriose, a branched oligosaccharide representing the branch point of starch 109
- Enzymatic synthesis
- Chemoenzymatic synthesis of 6"-S- α -D-glucopyranosyl-6"-thiomaltooligosaccharides: their binding to *Aspergillus niger* glucoamylase G1 and its starch-binding domain 313
- Enzymes
- Reaction of enzymes with starch granules: kinetics and products of the reaction with glucoamylase 87
- Escherichia coli*
- Structure of the O-specific side chain of the *Escherichia coli* O128 lipopolysaccharide 283
- Ethylene carbonate
- Cyclic carbonates as protecting groups in cyclitol chemistry C5
- D-Fructose
- Synthesis of methylene acetals in the D-glucose, D-galactose, D-mannose, and D-fructose series by an improved transacetalation reaction from dimethoxymethane 339
- Galactomannomannan
- Structural study of a polysaccharide from the seeds of *Borassus flabellifer* Linn. 189
- α -D-Galactopyranosyl-(1 \rightarrow 1)- α -D-galactopyranoside

- A facile synthesis of α -D-galactopyranosyl-(1 \rightarrow 1)- α -D-galactopyranoside and its analogues 347
- D-Galactose
- Synthesis of methylene acetals in the D-glucose, D-galactose, D-mannose, and D-fructose series by an improved transacetalation reaction from dimethoxymethane 339
- α -D-Gal p-(1 \rightarrow 3)- α -D-Glc pNAc-OMe
- Stereoselective preparation of alkyl glycosides of 2-acetamido-2-deoxy- α -D-glucopyranose by nonclassical halide-ion catalysis and synthesis and NMR spectroscopy of α -D-Gal p-(1 \rightarrow 3)- α -D-Glc pNAc-OMe 171
- GlcNAc oxazoline
- Hydrolysis of the GlcNAc oxazoline: deamidation and acyl rearrangement 125
- Glucoamylase
- Reaction of enzymes with starch granules: kinetics and products of the reaction with glucoamylase 87
 - Chemoenzymatic synthesis of 6"-S- α -D-glucopyranosyl-6"-thiomaltooligosaccharides: their binding to *Aspergillus niger* glucoamylase G1 and its starch-binding domain 313
- D-Glucose
- Synthesis of methylene acetals in the D-glucose, D-galactose, D-mannose, and D-fructose series by an improved transacetalation reaction from dimethoxymethane 339
- Glycolipids
- Synthesis of model glycolipids having two long alkyl chains C1
- Glycosaminoglycan
- Conformational analysis of heparin epoxide in aqueous solution. An NMR relaxation study 11
- Glycosaminoglycans
- Conformational analysis of heparin epoxide: molecular mechanics computations 25
- trans-Glycosidation
- Chemical synthesis of 6'- α -maltosyl-maltotriose, a branched oligosaccharide representing the branch point of starch 109
- Glycoside
- Synthesis of 2- and 4-nitrophenyl β -glycosides of β -(1 \rightarrow 4)-D-xylo-oligosaccharides of dp 2-4 231
 - Synthesis of the 2-deoxy analogue of the methyl α -glycoside of the monosaccharide repeating unit of the O-polysaccharide of *Vibrio cholerae* O:1 327
- Grape
- Characterization of five type II arabinogalactan-protein fractions from red wine of increasing uronic acid content 135
- Group B *Streptococcus*
- Structural elucidation of the novel type VII group B *Streptococcus* capsular polysaccharide by high resolution NMR spectroscopy 1
- Hafnia alvei*
- Structure of the *Hafnia alvei* strain PCM 1188 O-specific polysaccharide 245
- Heparin
- Conformational analysis of heparin epoxide: molecular mechanics computations 25
- Heparin derivatives
- Conformational analysis of heparin epoxide: molecular mechanics computations 25
- Heparin epoxide
- Conformational analysis of heparin epoxide in aqueous solution. An NMR relaxation study 11
- D-manno-Heptulose
- Tungstate complexes of aldoses and ketoses of the lyxo series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39
- Hydrogen bonding
- The crystal structure of methyl β -cellotriose monohydrate 0.25 ethanolate and its relationship to cellulose II 209
- Inclusion complex
- Convenient preparation of monoacylated β -cyclodextrin (cyclomaltoheptaose) on the secondary hydroxyl side 333
- myo-Inositol 1,2-carbonate
- Cyclic carbonates as protecting groups in cyclitol chemistry C5
- Inositol derivatives
- Cyclic carbonates as protecting groups in cyclitol chemistry C5
- K27 antigen
- NMR reinvestigation of the capsular K27 polysaccharide (K27 antigen) from *Escherichia coli* O8:K27:H- 353
- Lactobacillus* sp. 26X
- Partial purification and characterization of nitrophenyl maltosaccharide-hydrolyzing enzymes from *Lactobacillus* sp. no. 26X 161
- Lipopolysaccharide
- Structure of the *Hafnia alvei* strain PCM 1188 O-specific polysaccharide 245
 - Structure of the O-specific side chain of the *Escherichia coli* O128 lipopolysaccharide 283
- LPS
- Structure of the *Hafnia alvei* strain PCM 1188 O-specific polysaccharide 245

D-Lyxose

Tungstate complexes of aldoses and ketoses of the *lyxo* series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39

D-Mannose

Tungstate complexes of aldoses and ketoses of the *lyxo* series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39

Synthesis of methylene acetals in the D-glucose, D-galactose, D-mannose, and D-fructose series by an improved transacetalation reaction from dimethoxymethane 339

Metal ions

Relative reducing abilities in vitro of some hydroxy-containing compounds, including monosaccharides, towards vanadium(V) and molybdenum(VI) 197

p-Methoxyphenyl pyranosides

Deprotection of p-methoxyphenyl pyranosides by anodic oxidation 321

Methylation analysis

Trialkylsilyl derivatives of cyclomaltoheptaose, cellulose, and amylose: rearrangement during methylation analysis 179

Methyl β -cellotrioside

The crystal structure of methyl β -cellotrioside monohydrate 0.25 ethanolate and its relationship to cellulose II 209

Methylene acetals

Synthesis of methylene acetals in the D-glucose, D-galactose, D-mannose, and D-fructose series by an improved transacetalation reaction from dimethoxymethane 339

Modified maltodextrins

Chemoenzymatic synthesis of 6^{ac}-S- α -D-glucopyranosyl-6^{ac}-thiomaltooligosaccharides: their binding to *Aspergillus niger* glucoamylase G1 and its starch-binding domain 313

Molecular mechanics

Conformational analysis of heparin epoxide: molecular mechanics computations 25

Molecular weight

Molecular weight manipulation of chitosan I: kinetics of depolymerization by nitrous acid 257

Molecular weight manipulation of chitosan II: prediction and control of extent of depolymerization by nitrous acid 273

Molybdate complexes

Tungstate complexes of aldoses and ketoses of the *lyxo* series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39

Monosaccharides

Relative reducing abilities in vitro of some hydroxy-containing compounds, including monosaccharides, towards vanadium(V) and molybdenum(VI) 197

Mycobacterium tuberculosis

Synthesis of a pentasaccharide fragment of Polysaccharide II of *Mycobacterium tuberculosis* 51

Nicotiana glauca

Structural analysis of the carbohydrate moiety of arabinogalactan-proteins from stigmas and styles of *Nicotiana glauca* 67

Nitrophenyl maltosaccharide-hydrolyzing enzymes

Partial purification and characterization of nitrophenyl maltosaccharide-hydrolyzing enzymes from *Lactobacillus* sp. no. 26X 161

Nitrous acid

Molecular weight manipulation of chitosan I: kinetics of depolymerization by nitrous acid 257

Molecular weight manipulation of chitosan II: prediction and control of extent of depolymerization by nitrous acid 273

NMR

Structure of the O-specific side chain of the *Escherichia coli* O128 lipopolysaccharide 283

NMR relaxation

Conformational analysis of heparin epoxide in aqueous solution. An NMR relaxation study 11

NMR spectroscopy

Structural elucidation of the novel type VII group B *Streptococcus* capsular polysaccharide by high resolution NMR spectroscopy 1

NMR reinvestigation of the capsular K27 polysaccharide (K27 antigen) from *Escherichia coli* O8:K27:H⁻ 353

Oligosaccharide

Metabolism of xyloglucan generates xylose-deficient oligosaccharide subunits of this polysaccharide in etiolated peas 291

Pea

Metabolism of xyloglucan generates xylose-deficient oligosaccharide subunits of this polysaccharide in etiolated peas 291

Pectin

Characterization of five type II arabinogalactan-protein fractions from red wine of increasing uronic acid content 135

Pentasaccharide

Synthesis of a pentasaccharide fragment of Polysaccharide II of *Mycobacterium tuberculosis* 51

Polyols

Relative reducing abilities in vitro of some hydroxy-containing compounds, including monosaccharides, towards vanadium(V) and molybdenum(VI) 197

Polysaccharide

Synthesis of the 2-deoxy analogue of the methyl α -glycoside of the monosaccharide repeating unit of the O-polysaccharide of *Vibrio cholerae* O:1 327

Polysaccharide derivatives

Trialkylsilyl derivatives of cyclomaltoheptaose, cellulose, and amylose: rearrangement during methylation analysis 179

Polysaccharide II

Synthesis of a pentasaccharide fragment of Polysaccharide II of *Mycobacterium tuberculosis* 51

Polysaccharides

Structural study of a polysaccharide from the seeds of *Borassus flabellifer* Linn. 189

Protecting group

Cyclic carbonates as protecting groups in cyclitol chemistry C5

Rearrangement of trialkylsilyl ethers

Trialkylsilyl derivatives of cyclomaltoheptaose, cellulose, and amylose: rearrangement during methylation analysis 179

Reduction

Relative reducing abilities in vitro of some hydroxy-containing compounds, including monosaccharides, towards vanadium(V) and molybdenum(VI) 197

Reductive cleavage

Trialkylsilyl derivatives of cyclomaltoheptaose, cellulose, and amylose: rearrangement during methylation analysis 179

Rhamnogalacturonan I

Characterization of five type II arabinogalactan-protein fractions from red wine of increasing uronic acid content 135

L-Rhamnose

Tungstate complexes of aldoses and ketoses of the *lyxo* series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39

Secondary acylation

Convenient preparation of monoacylated β -cyclodextrin (cyclomaltoheptaose) on the secondary hydroxyl side 333

Starch granules

Reaction of enzymes with starch granules: kinetics and products of the reaction with glucoamylase 87

Structural analysis

Structural analysis of the carbohydrate moiety of arabinogalactan-proteins from stigmas and styles of *Nicotiana glauca* 67

Structure

NMR reinvestigation of the capsular K27 polysaccharide (K27 antigen) from *Escherichia coli* O8:K27:H⁻ 353

Subsite mapping

Characterization of high pI α -glucosidase from germinated barley seeds: substrate specificity, subsite affinities and active-site residues 145

Substrate specificity

Characterization of high pI α -glucosidase from germinated barley seeds: substrate specificity, subsite affinities and active-site residues 145

Substrate specificity

Partial purification and characterization of nitrophenyl maltosaccharide-hydrolyzing enzymes from *Lactobacillus* sp. no. 26X 161

Synthesis

Synthesis of the 2-deoxy analogue of the methyl α -glycoside of the monosaccharide repeating unit of the O-polysaccharide of *Vibrio cholerae* O:1 327

A facile synthesis of α -D-galactopyranosyl-(1 \rightarrow 1)- α -D-galactopyranoside and its analogues 347

D-Tagatose

Tungstate complexes of aldoses and ketoses of the *lyxo* series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39

Thiomaltodextrins

Chemoenzymatic synthesis of 6^{thio}-S- α -D-glucopyranosyl-6^{thio}-thiomaltooligosaccharides: their binding to *Aspergillus niger* glucoamylase G1 and its starch-binding domain 313

Thiophenolysis

Chemical synthesis of 6'- α -maltosyl-maltotriose, a branched oligosaccharide representing the branch point of starch 109

Trialkylsilylated polysaccharides

Trialkylsilyl derivatives of cyclomaltoheptaose, cellulose, and amylose: rearrangement during methylation analysis 179

Tungstate complexes

Tungstate complexes of aldoses and ketoses of the *lyxo* series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39

Type VII capsular polysaccharide

Structural elucidation of the novel type VII group B *Streptococcus* capsular polysaccharide by high resolution NMR spectroscopy 1

Uronic acid

Characterization of five type II arabinogalactan-protein fractions from red wine of increasing uronic acid content 135
1a20

Vibrio cholerae O:1

Synthesis of the 2-deoxy analogue of the methyl α -glycoside of the monosaccharide repeating unit of the O-polysaccharide of *Vibrio cholerae* O:1 327

Wine

Characterization of five type II arabinogalactan-protein fractions from red wine of increasing uronic acid content 135

¹⁸³W NMR

Tungstate complexes of aldoses and ketoses of the *lyxo* series. Multinuclear NMR evidence for chelation by one or two oxygen atoms borne by the side chain of the furanose ring 39

Xylanase

Synthesis of 2- and 4-nitrophenyl β -glycosides of β -(1 \rightarrow 4)-D-xylo-oligosaccharides of dp 2-4 231

Xyloglucan

Metabolism of xyloglucan generates xylose-deficient oligosaccharide subunits of this polysaccharide in etiolated peas 291

 β -(1 \rightarrow 4)-D-Xylo-oligosaccharides, 2- and 4-Nitrophenyl glycosides

Synthesis of 2- and 4-nitrophenyl β -glycosides of β -(1 \rightarrow 4)-D-xylo-oligosaccharides of dp 2-4 231

 α -Xylosidase

Metabolism of xyloglucan generates xylose-deficient oligosaccharide subunits of this polysaccharide in etiolated peas 291

